SEARCH REQUEST FORM   Scientific and Technical Information Center - EIC2800
Rev. 1/26/2006   This is an experimental format -- Please give suggestions or comments to Jeff Harrison, JEF-4B68, 22511.

Date 6/16/06   Serial # 09/849537   Priority Application Date 5/7/01

Your Name M. Lewis

AU 2822   Phone 272-1938   Examiner # _____   Room 5A30

In what format would you like your results? Paper is the default.   PAPER   DISK   EMAIL

If submitting more than one search request form, please prioritize the searches in order of need.

Need before 6/22

Where have you searched so far on this case?
Circle: USPT   DWPI   EPO-Abs   JPO Abs   IBM TDB
Other:_____

What relevant art have you found so far? Please attach citations or Information Disclosure Statements.
_____

What types of references would you like? Please checkmark:
Primary Refs __✓__   Nonpatent Literature ____   Teaching Refs ____
Secondary Refs __✓__   Foreign Patents ____   Other ____

Is this a "Fast & Focused Search" request? (Circle One)   YES   NO

A "Fast & Focused Search" is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2800 and on the STIC NPL Web Page at http://uspto-a-pattr-2/siraapps/stic/npl/nplsearch.htm

What is the topic, such as the novelty, motivation, utility, or other specific facets defining the desired focus of this search?   Please include the concepts, synonyms, keywords, acronyms, registry numbers, definitions, structures, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract and pertinent claims.

Claims 13, 16, 17, 52-54 & 69-71

Ball Grid Array
Heat Spreader

Problem: See pages 2 & 3
Solution: "   "   "   3 & 4

US 5,744,863   US 6,583,513

Staff Use Only

Searcher: __M. Mims__

Searcher Phone: __25928__

Searcher Location: STIC-EIC2800, JEF-4B68

Date Searcher Picked Up: 6/20/06

Date Completed: 6/20/06

Searcher Prep/Rev Time: 30

Online Time: 3

Type of Search

Structure (#)____

Bibliographic __✓__

Litigation____

Fulltext____

Patent Family____

Other____

Vendors

STN __✓__

Dialog____

Questel/Orbit____

Lexis-Nexis____

WWW/Internet____

Other____

=> d his full

        (FILE 'HOME' ENTERED AT 16:19:17 ON 20 JUN 2006)

        FILE 'CAPLUS' ENTERED AT 16:20:11 ON 20 JUN 2006
L1   1 SEA ABB=ON   PLU=ON   US20020171144/PN
            D IBIB ABS IND

        FILE 'WPIX' ENTERED AT 16:21:20 ON 20 JUN 2006
L2   1 SEA ABB=ON   PLU=ON   US20020171144/PN
            D IFULL

        FILE 'INSPEC' ENTERED AT 16:22:04 ON 20 JUN 2006
                E HEAT SPREADER/CT
                E CIRCUIT BOARD/CT
                E CIRCUIT BOARDS/CT
                E PRINTED CIRCUIT BOARDS/CT
                E E3+ALL
L3   50740 SEA ABB=ON   PLU=ON   BALL LIMIT? METALLUR? OR BLM OR BGA OR
            GRID ARRAY OR BUMP OR SOLDER(W)(BALL OR BUMP? OR PIN) OR
            SOLDERBALL OR BOC OR BOARD(2A)CHIP OR FCBGA OR FCOB OR FPBGA
            OR DDC OR DIE CONTACT OR FLIP CHIP OR MCM OR MULTI CHIP
            MODULE OR LSI OR CSP OR CHIP SCALE OR PGA OR FR 4 OR FR4 OR
            PBGA OR C4
L4   329243 SEA ABB=ON   PLU=ON   ADHES? OR BOND? OR SEAL? OR ADHER? OR
            RESIN? OR CURING OR CURED OR CURE OR VULCAN? OR POLYMERIZATION
            OR POLYMERIZING OR HARDEN? OR ?EPOX? OR POLYCARBONATE
L5   38694 SEA ABB=ON   PLU=ON   PRINT? CIRCUIT BOARD OR PCB OR PRINT?
            CIRCUIT
L6   628 SEA ABB=ON   PLU=ON   HEAT SPREAD?
L7   1058 SEA ABB=ON   PLU=ON   STIFFENER?
L8   239914 SEA ABB=ON   PLU=ON   IC OR INTEGRAT? CIRCUIT?
L9   0 SEA ABB=ON   PLU=ON   L3 AND L4 AND L5 AND L6 AND L7 AND L8
L10   0 SEA ABB=ON   PLU=ON   L3 AND L4 AND L5 AND L6 AND L7
L11   18 SEA ABB=ON   PLU=ON   L3 AND L4 AND L5 AND L6 AND L8
L12   0 SEA ABB=ON   PLU=ON   RING AND L11
            D L11 IALL 1-18

        FILE 'WPIX' ENTERED AT 16:31:04 ON 20 JUN 2006
L13   93878 SEA ABB=ON   PLU=ON   BALL LIMIT? METALLUR? OR BLM OR BGA OR
            GRID ARRAY OR BUMP OR SOLDER(W)(BALL OR BUMP? OR PIN) OR
            SOLDERBALL OR BOC OR BOARD(2A)CHIP OR FCBGA OR FCOB OR FPBGA
            OR DDC OR DIE CONTACT OR FLIP CHIP OR MCM OR MULTI CHIP
            MODULE OR LSI OR CSP OR CHIP SCALE OR PGA OR FR 4 OR FR4 OR
            PBGA OR C4
L14   2238975 SEA ABB=ON   PLU=ON   ADHES? OR BOND? OR SEAL? OR ADHER? OR
            RESIN? OR CURING OR CURED OR CURE OR VULCAN? OR POLYMERIZATION
            OR POLYMERIZING OR HARDEN? OR ?EPOX? OR POLYCARBONATE
L15   112050 SEA ABB=ON   PLU=ON   PRINT? CIRCUIT BOARD OR PCB OR PRINT?
            CIRCUIT
L16   1391 SEA ABB=ON   PLU=ON   HEAT SPREAD?
L17   6275 SEA ABB=ON   PLU=ON   STIFFENER?
L18   319829 SEA ABB=ON   PLU=ON   IC OR INTEGRAT? CIRCUIT?
L19   25810 SEA ABB=ON   PLU=ON   STIFFEN?
L20   6 SEA ABB=ON   PLU=ON   L13 AND L14 AND L15 AND L16 AND L18 AND
            L19
            D IFULL 1-6

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      FILE 'CAPLUS' ENTERED AT 16:41:02 ON 20 JUN 2006
L21      115591 SEA ABB=ON  PLU=ON  BALL LIMIT? METALLUR? OR BLM OR BGA OR
                GRID ARRAY OR BUMP OR SOLDER(W)(BALL OR BUMP? OR PIN) OR
                SOLDERBALL OR BOC OR BOARD(2A)CHIP OR FCBGA OR FCOB OR FPBGA
                OR DDC OR DIE CONTACT  OR FLIP CHIP OR MCM OR MULTI CHIP
                MODULE OR LSI OR CSP OR CHIP SCALE OR PGA OR FR 4 OR FR4 OR
                PBGA  OR C4
L22     2946065 SEA ABB=ON  PLU=ON  ADHES? OR BOND? OR SEAL? OR ADHER? OR
                RESIN? OR CURING OR CURED OR CURE OR VULCAN? OR POLYMERIZATION
                OR POLYMERIZING OR HARDEN? OR ?EPOX? OR POLYCARBONATE
L23       71803 SEA ABB=ON  PLU=ON  PRINT? CIRCUIT BOARD OR PCB OR PRINT?
                CIRCUIT
L24         883 SEA ABB=ON  PLU=ON  HEAT SPREAD?
L25       96140 SEA ABB=ON  PLU=ON  IC OR INTEGRAT? CIRCUIT?
L26        6372 SEA ABB=ON  PLU=ON  STIFFEN?
L27           1 SEA ABB=ON  PLU=ON  L21 AND L22 AND L23 AND L24 AND L25 AND
                L26
L28           1 SEA ABB=ON  PLU=ON  L27 NOT L1
                D IALL
                D IBIB ABS
                D IBIB ABS HITIND
                E HEAT SPREADER/CT
                E E1+ALL
L29           1 SEA ABB=ON  PLU=ON  L21 AND L22 AND L23 AND L25 AND L26
L30           0 SEA ABB=ON  PLU=ON  L29 NOT L28
L31        1830 SEA ABB=ON  PLU=ON  L21 AND L22 AND L23
L32           6 SEA ABB=ON  PLU=ON  L31 AND L26

L33           5 SEA ABB=ON  PLU=ON  L32 NOT (L1 OR L28)
                D IBIB ABS HITIND 1-5
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